



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,557	12/21/2001	Takuya Ogane	2185-0607P	3620

2292 7590 05/01/2003

BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER

LEE, RIP A

ART UNIT	PAPER NUMBER
----------	--------------

1713

DATE MAILED: 05/01/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicati n No.

10/024,557

Applicant(s)

OGANE, TAKUYA

Examiner

Rip A. Lee

Art Unit

1713

-- Th MAILING DATE of this communication appears on the cover she t with the corresp ndence address --

**Peri d f r Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 1 and 3-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority. It is noted, however, that Applicant has not filed a certified copies of JP 2000-395776, JP 2001-194575, and JP 2001-194576 as required by 35 U.S.C. 119(b).

### ***Claim Objections***

2. Claim 1 is objected to because of the following informalities: The phrase "of the catalyst component or the catalyst" adds nothing to the claim and may be removed. The separation process involves the relative rates of sedimentation of all materials in the system, not just the catalyst or catalyst component. Appropriate correction is required.

3. Claims 3-10 are objected to because of the following informalities: Replace "obtainable" with "obtained" because the former term imparts uncertainty to the claim. Appropriate correction is required.

4. Claim 3 is objected to because of the following informalities: (i) remove the parentheses and use an introductory word "wherein" to link the recitation on page 124, lines 2-13 to the preceding portion of the claim, (ii) in line 2, delete the word "respectively," (iii) in line 3, remove the word "typical," (iv) in line 12, remove the phrase "in respective compounds," since it is clear that the elements in compounds [1] to [3] are being defined. Appropriate corrections are required.

5. Claim 4 is objected to because of the following informalities: (i) remove the parentheses and use an introductory word “wherein” to link the recitation on page 124, line 28 – page 125, line 10 to the preceding portion of the claim, (ii) on page 124, line 28, delete the word “respectively,” (iii) in line 29, remove the word “typical,” (iv) on page 125, line 9, remove the phrase “in respective compounds,” since it is clear that the elements in compounds [1] to [3] are being defined. Appropriate corrections are required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is deemed that the catalysts of the invention are homogeneous or they are not. The term “homogeneous type” is a relative term which renders the claim indefinite. The term is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,344,528 to Ushioda *et al.*

Ushioda *et al.* teaches a process for preparing a catalyst comprising a transition metal compound and an aluminosilicate carried on a fine particulate carrier (see claim 1). The catalyst is used for preparing polyolefins. Examples of the transition metal compound are enumerated in col. 3 – col. 4 in the text, and these meet the structural requirements of the present claims. According to the experimental procedure, silica, methylalumoxane, and metallocene are combined, after which time the reaction mixture is allowed to stand until it separated into supernatant and precipitate. Thereafter, the supernatant was removed (Example 7). The difference between the current invention and that of Ushioda *et al.* is that the prior art does not

use the terminology, “utilizing a difference between sedimentation velocities,” to describe the separation process.

The experimental procedure of the present invention and that of Ushioda *et al.* are essentially the same, namely, catalyst components are added, and the resulting mixture is allowed to stand in order to allow for sedimentation to occur. Although the word “precipitates (col. 15, line 25)” is used by the inventors, it is clear that solid material already existed because (i) silica is not soluble and (ii) solid material was already suspended in the solvent (col. 15, line 21). Thus, it is obvious that sedimentation is the operative process here. Ushioda *et al.* does not teach a process whereupon the reaction mixture is immediately filtered, as described in the Applicant’s comparative examples. Therefore, the skilled artisan reading this reference would find it obvious that the process of Ushioda *et al.* allows for the same objective: removal of material other than the desired catalyst by a sedimentation step.

Although the prior art does not indicate that the supernatant contains “fine-powdery component” and “shapeless component” there is no reason to believe that the supernatant is devoid of such material. In view of the fact that the method of Ushioda *et al.* is essentially the same as that described in the present claims, a reasonable basis exists to believe that such material is formed in the catalyst preparation step. Since the PTO can not conduct experiments, the burden of proof is shifted to the Applicants to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

11. Claims 1-4 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,054,406 to Smith.

Smith teaches a process for making a catalyst comprising a transition metal component and a particulate carrier (see claim 1). The catalyst is used for the polymerization of  $\alpha$ -olefins. According to the experimental procedure,  $ZrCl_4$ ,  $TiCl_4$ , and  $MgCl_2$  support are combined and the reaction mixture was stirred. When complete, stirring was stopped, and solids were allowed to settle over a period of approximately 20 minutes. Thereafter, the supernatant was removed (Example 1). The difference between the current invention and that of Smith is that the prior art does not use terminology, "utilizing a difference between sedimentation velocities," to describe the separation process.

The experimental procedure of the present invention and that of Smith are essentially the same, namely, catalyst components are added, and the resulting mixture is allowed to stand in order to allow for precipitation or sedimentation to occur. Note that Smith does not teach a process whereupon the reaction mixture is immediately filtered, as described in the Applicant's comparative examples. Therefore, the skilled artisan reading this reference would find it obvious that the process of Smith accomplishes the same objective: removal of material other than the desired catalyst by a sedimentation step. And although the prior art does not indicate that the supernatant contains "fine-powdery component" and "shapeless component" there is no reason to believe that the supernatant is devoid of such material.

In view of the fact that the method taught in Smith is essentially the same as that described in the present claims, a reasonable basis exists to believe that such material is formed in the catalyst preparation step. Since the PTO can not conduct experiments, the burden of proof

Art Unit: 1713

is shifted to the Applicants to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (703)306-0094. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (703)308-2450. The fax phone number for the organization where this application or proceeding is assigned is (703)746-7064. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

ral

April 25, 2003



DAVID W. WU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700